

REMARKS

Claims 1-22 and 28-47 are pending in this application. Claims 1-22 and 28-47 are rejected. Claim 35 has been canceled. Claims 1, 11-14, 28, 36 and 46 have been amended. Claims 48-51 have been added. No new subject matter has been added. Claims 1-22 and 28-51 remain pending. Reconsideration of the claims is requested in light of the following remarks.

Claim Rejections – 35 USC 103

Applicants have amended the claims and respectfully submit that each independent claim is not taught or suggested by the cited references. Amended independent claim 1 requires a display system requiring a switch, sensing and driving circuitry and an LED or diode, such that the LED can switch from sensing to emitting light and a feedback controller coupled with the sensing and driving circuits, the feedback controller to adjust the brightness of an LED in response to the amount of light sensed by that LED. Independent claim 28 requires a method of operating a display system in similar fashion to claim 1. Independent claim 46 was amended to contain a similar limitation as claim 1 in that it may switch any diode in the display from a sense mode to an emit mode in the context of the claim, allowing any diode in the display to be used as a sensor for a pointing device.

The primary reference in every 103(a) rejection, Stam, discusses that an LED may be operated in either mode and may have various driving circuitry, but Stam does not teach or suggest a display system with the *same* LED or diode coupled with switch that is also coupled to the sensing and driving circuits to allow operation in both driving and sensing modes nor does it teach or suggest a feedback controller coupled with the sensing and driving circuits, the feedback controller to differentially adjust the brightness of an LED in response to the amount of light sensed by that LED.

Cok discusses an emissive display with a representative light emitting pixel and a photosensor located on the display but does not discuss using the LEDs of the display as the representative pixel or photosensor. In fact, Cok explicitly teaches away from the claimed invention by stating the operation of the representative pixels will not affect the operation of the pixel array in the display. Cok therefore would not cure the deficiencies of Stam even if it did contain a feedback controller to differentially adjust the brightness of an LED in response to the amount of light sensed by that LED.

Applicants note that Scozzafava discusses an alternating current power source (driving circuitry) that may operate an LED in forward bias and reverse bias, but does not

disclose a switch and sensing and driving circuitry coupled to an LED in a display to allow a feedback controller to differentially adjust the brightness of that LED in response to the amount of light sensed by that LED. Therefore, the driving circuitry of the cited references, even in combination with an LED that may operate in either mode and the rest of the cited references, would not teach or suggest the subject matter in the claims as amended.

Applicants respectfully submit that the other cited references do not cure the deficiencies of Stam for any of the independent claims. Additionally, in claim 11, applicants respectfully submit that Stam, even in view of Cok, does not teach or suggest a display wherein in a first mode a driving circuit is coupled to a first row of LEDs while the sensing circuit is coupled to a second row of LEDs adjacent to the first row of LEDs, and in a second mode the driving circuit is coupled to the second row of LEDs and the sensing circuit is coupled to the first row of LEDs, wherein each LED can adjust its brightness in the emit mode in response to the amount of light sensed by that LED in the sense mode.

Since dependent claims necessarily contain the limitations of claims from which they depend, applicants respectfully submit the other dependent claims are also patentably distinguishable over the cited references. Generally, the dependent claims 2-14 and 41-47 are also patentably distinguishable over Stam in view of Cok, claims 15 and 16 and patentably distinguishable over Stam in view of Cok and Gu, claims 17-19 and 41 are patentably distinguishable over Stam in view of Cok and Ogawa, claims 20-22 are patentably distinguishable over Stam in view of Cok and Forrest, claims 28, 29 and 32-35 are patentably distinguishable over Stam in view of Mueller, claims 30 and 31 are patentably distinguishable over Stam in view of Mueller in view of Scozzafava, claim 36 is patentably distinguishable over Stam in view of Mueller and Gu, and claims 37-39 are patentably distinguishable over Stam in view of Mueller in view of Ogawa.

New claims 48-51 in fact claim an apparatus including an (LED) and circuitry to adjust the brightness of the LED in response to the amount of light sensed by the LED. No new matter has been added. In particular, the first full paragraph on page 7 in the application as filed, the second full paragraph of page 8 in the application as filed (FIG. 5 reference), and the last paragraph of page 11 support the new claims.

CONCLUSION

For the foregoing reasons, reconsideration and allowance of claims 1-22 and 28-51 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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I hereby certify that this correspondence
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Signed:


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